

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement filed 24 March 2009 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. They have been placed in the application file, but the information referred to therein have not been considered. Specifically, copies of EP 0 344 365 A2, JP 10-128890, JP 09-038358, EP 1 182 286 A1, and JP 08-061410 were not provided. More specifically, it appears that only the first page of EP 0 344 365 A2 and EP 1 182 286 A1 were provided, and only the first page and an English language abstract of JP 10-128890, JP 09-038358, and JP 08-061410 were provided.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ebihara et al. (JP 08-061414; JPO abstract and machine translation relied upon for citation) in view of Nomizo et al. (US Patent Number 5,366,678).

With respect to Claim 1, Ebihara teaches making a cushion body using a network structure object 11 of loops of endless material (a method for producing a cushion

material composed of a resin molded article having a spring structure having a three-dimensional structure with voids at a predetermined bulk density; forming the three-dimensional structure by contacting, entwining, and gathering adjacent ones of random loops or curls of solid and/or hollow filaments made from a thermoplastic resin) (see abstract; figs. 2 and 8; [0011]; [0019]; and [0034]), placing the structure with high density layer 11f into a mold half and lowering another mold half into the structure (placing the three-dimensional structure within a cavity of a female die; setting a volume of the cavity of the female-die to accommodate a stroke of a male-die in a translation into the cavity, said stroke being a distance of the translation of said male-die into said cavity to a position between a minimum strike closest to a top of said cavity and a maximum stroke, said maximum stroke being at a deep level within said cavity closest to a bottom thereof; adjusting a thickness of the three-dimensional structure by said translation of the male die while removably engaged with a base adapted for permanent attachment to said three-dimensional structure, into the cavity of the female die for a said stroke equal to or less than said maximum stroke; compressing the three-dimensional structure between said base and said bottom of said cavity to a thickness corresponding to the length of the stroke of the male-die into the female-die) (see [0037] and fig 13). The mold is cooled, and the product is removed (hardening the three-dimensional structure by a cooling thereof) (see [0026]).

Although Ebihara teaches heating to a heat deflection temperature (see [0037]), Ebihara does not appear to expressly teach heating at least the female die to a

temperature sufficiently high to soften the three-dimensional structure within the cavity of the female die.

Nomizo teaches heating a lower mold part 22 filled with thermofusible fiber within mixed cotton 14 to 200 °C to soften and compress the fiber (heating at least the female die to a temperature sufficiently high to soften the three-dimensional structure within the cavity of the female die) (see col. 4, lines 11-27 and col. 6, line 51 through col. 7, line 18).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to heat the female mold as taught by Nomizo in order to transfer additional heat to the molded material for softening (see Nomizo, col. 6, line 51 through col. 7, line 18).

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Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ebihara et al. (JP 08-061414 with JPO abstract and machine translation relied upon) as applied to claim 1 above, and further in view of Jang (US Patent No. 5,234,638).

With respect to Claim 2, Ebihara teaches a method of making a cushion material of a certain size as previously described but does not expressly teach trimming the edge with a heat cutter.

Jang teaches cutting a non-woven material's edges to size by using a heat cutter (superfluous edges protruded from the three-dimensional structure into the stroke between the two mating dies are cut with a heat cutter so that the edges are cut out and open ends of edge filaments are fused together) (see col. 1, lines 36-43).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Jang's cutting with the cushion body of Ebihara in order to form a product cut to desired size with sealed edges (see Jang, col. 1, lines 36-43).

Response to Arguments

Applicant's arguments filed 20 April 2009 have been fully considered, but they are not persuasive.

Applicant argues with respect to the 35 U.S.C. § 112, second paragraph, rejections. Applicant's arguments appear to be on the grounds that:

1) The amendments to the claims overcome the 35 U.S.C. § 112, second paragraph, rejections.

Applicant argues with respect to the 35 U.S.C. § 102(b) rejections. Applicant's arguments appear to be on the grounds that:

2) Ebihara does not teach a male die with a base which forms a part of the product.

3) Ebihara does not place the base in the mold with the male die.

The Applicant's arguments are addressed as follows:

1) In view of Applicant's amendments to Claim 1, the Examiner withdraws the previously set forth 35 U.S.C. § 112, second paragraph, rejection as detailed in the Claim Rejections – 35 U.S.C. § 112 section of the Office Action dated 22 July 2008.

2) Applicant's arguments with respect to the newly claimed limitations of the base on the male die have been considered but are moot in view of the new ground(s) of rejection. It is noted that the current rejection is made over Ebihara et al. (JP 08-061414 with JPO abstract and machine translation relied upon) in place of the previous rejection over Ebihara et al. (JP 08-061413 with JPO abstract and machine translation relied upon).

3) As recited above, Ebihara places high density layer 11f into a mold half and lowering another mold half into the structure (see [0037] and fig 13).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Butler whose telephone number is (571) 272-8517. The examiner can normally be reached on Mon.-Thu. 7:30 a.m.-5 p.m. and alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. B./
Examiner, Art Unit 1791

/Christina Johnson/
Supervisory Patent Examiner, Art Unit 1791